

CLAIMS:

1. (Currently amended) A method of coating a carbon article with a polymerizable metal complex by reductively electropolymerizing the polymerizable metal complex on the carbon article through cyclic voltammetry, and thereby forming a polymerized metal coating on the carbon article by effecting a step-wise increase in current until the polymerizable metal complex is saturated on the carbon article.
2. (Previously presented) The method according to claim 1, wherein said reductively electropolymerizing step includes immersing the carbon article in a solution containing a polymerizable and reducible metal compound.
3. (Canceled)
4. (Previously presented) The method according to claim 2, wherein said reductively electropolymerizing step includes varying electrical potential from about zero volts to about -1.0 volts with a rate of potential change of about 100 millivolts per second.
5. (Previously presented) The method according to claim 4, wherein said method further includes repeating the varying step until a sufficient metal coating is deposited on the carbon article.
6. (Withdrawn) A metal-coated carbon article formed by the method of claim 1.
7. (Withdrawn) The metal-coated carbon article according to claim 6, wherein said carbon article is selected from the group consisting essentially of carbon paper, carbon rods, and carbon electrodes.

8. (Withdrawn) The metal-coated carbon article according to claim 7, wherein said carbon article is an electrode.

9. (Withdrawn) The metal-coated carbon article according to claim 8, wherein said electrode is a fuel cell electrode.

10. (Withdrawn) The metal-coated carbon article according to claim 6, wherein said metal is selected from the group consisting essentially of platinum, gold, silver, palladium, ruthenium, rhodium, and iridium.

11. (Withdrawn) The metal-coated carbon article according to claim 10, wherein said metal-coated carbon article is a platinum-coated carbon electrode.

12. (Withdrawn) The metal-coated carbon article according to claim 11, wherein said coating is present in an amount less than about 0.1 mg/cm.².

13. (Withdrawn) A metal-coated carbon article comprising: a carbon article; and a metal coating disposed on an exterior surface of said carbon article, said coating being present in an amount less than about 0.1 mg/cm.².

14. (Withdrawn) The metal-coated carbon article according to claim 13, wherein said carbon article is selected from the group consisting essentially of carbon paper, carbon rods, and carbon electrodes.

15. (Withdrawn) The metal-coated carbon article according to claim 14, wherein said carbon article is an electrode.

16. (Withdrawn) The metal-coated carbon article according to claim 15, wherein said electrode is a fuel cell electrode.

17. (Withdrawn) The metal-coated carbon article according to claim 13, wherein said metal is selected from the group consisting essentially of platinum, gold, silver, palladium, ruthenium, rhodium, and iridium.

18. (Withdrawn) The metal-coated carbon article according to claim 16, wherein said metal-coated carbon article is a platinum-coated carbon electrode.

19. (Withdrawn) The metal-coated carbon article according to claim 13, wherein said coating is present in an amount less than about 0.08 mg/cm.².

20. (Withdrawn) The metal-coated carbon article according to claim 13, wherein said coating is present in an amount less than about 0.05 mg/cm.².

21. (Withdrawn) The metal-coated carbon article according to claim 13, wherein said coating is present in an amount less than about 0.03 mg/cm.².

22. (Withdrawn) The metal-coated carbon article according to claim 13, wherein said coating is capable of reducing oxygen in phosphoric acid, neutral, and basic media.

23. (Withdrawn) The metal-coated carbon article according to 22, wherein said metal-coated carbon article are capable of rendering active platinum surfaces for charge accumulation through hydrogen deposition and release.

24. (Currently amended) A method of coating a carbon article with a polymerizable metal complex by reductively electropolymerizing the polymerizable metal on the carbon article by controlling potential, thereby and forming a polymerized metal coating on the carbon article by effecting a step-wise increase in current until the polymerizable metal is saturated on the carbon article.